

RANCHERS EXPLORATION AND DEVELOPMENT CORPORATION

Box 6217 / 1776 Montano Road, N.W. / Albuquerque, New Mexico 87197
Telephone (505) 344-3542 / TWX 910 989 1688 RANC EXPLO ABQ
TLX 66 0422 RAN EXP ALB

To Wayne &
Pam for review
then file
ACT/021/004

March 18, 1983

Utah Division of Oil, Gas & Mining
Attn: Mr. Jim Smith
4241 State Office Building
Salt Lake City, UT 84114

MAR 22 1983

JIM

MAR 22 1983

DIVISION OF
OIL, GAS & MINING

Subject: Expansion of the Escalante Silver Mine Tailings Dam

Dear Mr. Smith:

You may recall that Ranchers constructed a state-approved tailings dam as part of our Escalante Silver project located near Enterprise, Utah, in 1981. As part of the project, we submitted drawings, specifications, technical considerations, and other requested data to your agency in early 1981. The project was approved by the various state agencies involved, and construction went forward.

When we originally designed the dam, we did so on the basis of milling 500 tpd of ore, with an expected mine life of 10 years. We planned on expanding the dam in two more stages in the mid-1980s and again towards the end of the decade. The proposed expansion work was shown on the original drawings submitted to your office in early 1981. (A complete set of drawings is enclosed for reference.)

However, subsequent to the fall of 1981, we have increased the milling rate up to 800 tpd. Consequently, we are filling up the Stage 1 dam faster than originally anticipated. A compounding factor is that the dam capacity design was based on tailings weighing 90#/CF whereas, in fact, it weighs somewhat less.

Because of these two factors, we now need to expand the dam much sooner than we had originally planned. Based on recent calculations, we need to have the dam expansion done by December 1983. This date has been determined by working backwards from a capacity standpoint, allowance of a safety freeboard, and taking into consideration the mobility of earthmoving equipment near the pond (we are concerned that upward-migrating solutions through capillary action will preclude scrapers from getting too close to the water level in the pond).

We are proposing to commence work no earlier than May 1, 1983, with construction finalized no later than November 1, 1983. The actual work is anticipated to take approximately two months. We wish to tender the bid documents as soon as possible, as we may be able to realize some significant cost savings by being flexible in our start dates, where a contractor may be able to provide a more reasonable bid by scheduling his equipment and personnel to suit his workload requirements.

The dam expansion to Stage 3 has already been designed per the enclosed drawings. We will follow the design using the applicable portions of the same general and technical

specifications used on the original job in 1981. We would employ F. M. Fox and Associates as geotechnical consultants and as technical supervisors of the job in the same manner as we did before.

Further, we would follow the same procedures and conditions originally specified by the Division of Water Rights and the Department of Environmental Health, such as submittal of the names and qualifications of the Fox inspectors, submittal of daily inspection reports, submittal of material tests, etc. Additional clay lining is to be installed on the inside face of the expanded dam as well as in the pond area itself, identical to the original construction.

We will use the same form of tender as used before, modified as appropriate, (since certain aspects of the construction are not the same for the expansion as they were for the original job).

I submitted copies of the general and technical specifications to your office in 1981. I assume you still have them. They are in a black and yellow three-ring F. M. Fox binder.

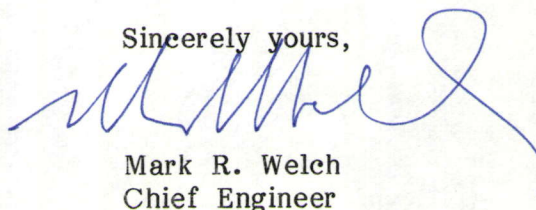
Since we will be covering the existing piezometers, we will install new piezometers. I might mention that we have had no evidence of any seepage through the dam structure whatsoever. Further, our continuous monitoring of the ground water around the tailings pond shows no signs of seepage of contaminants at all.

So, in summary, we are requesting approval of the expansion of the dam, with this work to be accomplished in accordance with the original plans and specifications, as well as conditions prescribed by your agency. Because of the potentially favorable economic considerations mentioned earlier, we request that we receive approval as soon as practical.

I am sending similar letters to the Utah Department of Health and the Utah Division of Water Rights for their information, comments, and approval as appropriate.

If you have any questions, please contact me. Thank you very much for your assistance on this matter.

Sincerely yours,



Mark R. Welch
Chief Engineer

MRW/cje

Enclosures

cc: D. K. Hogan
R. E. Scheffel
E. Hahne
D. V. Dyk
M. C. Anderson
P. A. Matthews

March 18, 1983

Escalante Silver Mine Tailings Dam Expansion Project

Purpose:

To expand the tailings dam capacity for accomodation of mill tailings. This work is necessary due to increased milling rates and changes in the density of tailings. The work is simply an acceleration, from a time standpoint, of work previously planned to take place in the mid-1980s (Stage 2) and late 1980s (Stage 3). The dam is to be expanded to Stage 3 in one expansion effort.

Time Schedule:

The work is scheduled to commence no earlier than May 1, 1983, and be completed no later than November 1, 1983. The work itself is anticipated to take approximately two months.

Scope of Project:

- A. Dam: The dam is to be elevated 20' in height from its present elevation (5379' to 5399'). The inside face of the dam is to be faced with a compacted clay liner. The existing graveled road surface on top of the dam is to be removed, and a keyway cut into the present top of the dam. The keyway is to be backfilled with compacted clay. The 20' height expansion will be constructed out of compacted clay and select materials. New peizometers and settlement monuments are to be installed in or on the dam.
- B. Tailings Pond: The expanded pond limits have already been partially brushed and grubbed, as part of the 1981 construction project. Any additional residual topsoil within the expansion limits is to be removed and stockpiled for future reclamation. Unsuitable liner materials are to be removed (rocks, etc.), and a compacted clay liner is to be installed to elevation 5394'. Additional underflow drains (for removal of solubilized silver and reduction of hydrostatic head on the clay liner) are to be installed.
- C. Other
 - 1. The 8' fence will be relocated if necessary.
 - 2. No changes are anticipated for the storm drainage interceptor ditch surrounding the area.
 - 3. No modifications are anticipated for the ground water monitoring well system.
 - 4. No changes are to be made to the reclaim line or feed line systems.
 - 5. The safety freeboard allowance for the facility will be maintained at a minimum of 5'.

Specifications and Drawings

The expansion project work is to be done in accordance with following documents:

1. Engineering and design drawings approved by the State Engineer in 1981 (Drawings E-1045-46-4210 through 4220).
2. "Geotechnical Investigation for the Proposed Mill Tailing Disposal Area" by F. M. Fox & Associates dated May 14, 1980.
3. "Tender Documents for the Construction of Tailing Dam" by F. M. Fox & Associates dated April 1981.
4. "Addendum to Geotechnical Investigation" by F. M. Fox & Associates dated May 5, 1981 addressed to the State Engineer (Robert L. Morgan).
5. All applicable stipulations and conditions required by the Utah State Engineer and the Utah Division of Environmental Health as part of the original 1981 construction project approvals.

All of the above referenced documents have been previously submitted to the various approving state agencies in 1981. However, for ease of reference, the drawings are included as part of this package.